

SAF-RC-076
100-D/DR Burial Grounds & Remaining
Sites – Aqueous Liquid Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Jeanette Duncan H4-21

KW 6/25/07
INITIAL/DATE

COMMENTS:

SDG J00114

SAF-RC-076

Rad only

X Chem only

Rad & Chem

X Complete

Partial

Waste Site: 100-D-56

RECEIVED
JUL 10 2007
EDMC

Analytical Data Package Prepared For
Washington Closure Hanford



Radiochemical Analysis By

STL Richland

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: STLRL

Data Package Contains 19 Pages

Report No.: 35707

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
J00114	RC-076	J155M9	J7F130344-1	J0XQ51AA	9J0XQ510	7165249

STL Richland
2800 George Washington Way
Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590
www.stl-inc.com

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 25, 2007

Attention: Joan Kessner

SAF Number	:	RC-076
Date SDG Closed	:	June 13, 2007
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	J00114
Data Deliverable	:	7 -Day / Summary

CASE NARRATIVE

I. Introduction

On June 13, 2007, one water sample was received at STL Richland (STLR) for chemistry analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Washington Closure Hanford (WCH) specific ID:

<u>WCH ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
J155M9	J0XQ5	WATER	6/13/07

II. Sample Receipt

The sample was received in good condition. There was no turn around time listed on the chain of custody. The client was notified on 6/14/07 by email. The client replied on the same day and instructed the laboratory that this sample needed a seven day turn around time.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses was:

Chemical Analysis
Hexavalent Chromium by EPA method 7196A

Washington Closure Hanford
June 25, 2007

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Chemical Analysis

Hexavalent Chromium by EPA method 7196A:

The LCS, batch blank, sample, sample duplicate (J155M9) and sample matrix spike (J155M9) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:


Sandra Seger
Project Manager

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation $(\text{Result}/\text{Expected}) - 1$ as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u_c - Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC/MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S - D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 25-Jun-07

STL Richland STLRL

Ordered by Client Sample ID, Batch No.

Report No. : 35707

SDG No: J00114

Client ID	Work Order Number	Parameter	Result +/- Uncertainty (2s)	Qual	Units	Yield	MDC/MDA	RPD
J155M9	J0XQ51AA	HEXCHROME	2.00E-03 +- 0.00E+00	U	mg/L	N/A	2.00E-03	
	J0XQ51AE	HEXCHROME	2.00E-03 +- 0.00E+00	U	mg/L	N/A	2.00E-03	0.0

Number of Results: 2

STL Richland
rptSTLRchSaSum
V5.1.3 A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary
STL Richland STLRL
 Ordered by QC Type, Batch No.

Date: 25-Jun-07

Report No. : 35707

SDG No.: J00114

QC Type	Work Order Number	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC/MDA
MATRIX SPIK	J0XQ51AC	HEXCHROME	5.31E-01 +- 0.00E+00		mg/L	N/A	101%	0.0	2.00E-03
MATRIX SPIK	J0XQ51AD	HEXCHROME	5.35E-01 +- 0.00E+00		mg/L	N/A	107%	0.1	2.00E-03
LCS	J01JA1AC	HEXCHROME	5.05E-01 +- 0.00E+00		mg/L	N/A	101%	0.0	2.00E-03
BLANK QC	J01JA1AA	HEXCHROME	2.00E-03 +- 0.00E+00	U	mg/L	N/A			2.00E-03

Number of Results: 4

STL Richland Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSum U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by
 V5.1.3 A2002 gamma scan software.

FORM I
SAMPLE RESULTS

Date: 25-Jun-07

Lab Name: STL Richland

SDG: J00114

Collection Date: 6/13/2007 12:33:00 PM

Lot-Sample No.: J7F130344-1

Report No.: 35707

Received Date: 6/13/2007 2:14:00 PM

Client Sample ID: J155M9

COC No.: RC-076-17

Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Count Qual Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7165249	Work Order: J0XQ51AA		Report DB ID: 9J0XQ510								
HEXCHROME	2.00E-03 U		0.0E+00	2.00E-03	mg/L	N/A	1.	6/13/07		100.0	7196_CR6
						2.00E-03	N/A			ML	

Number of Results: 1

Comments:

FORM II

Date: 25-Jun-07

DUPLICATE RESULTS

Lab Name: STL Richland

SDG: J00114

Collection Date: 6/13/2007 12:33:00 PM

Lot-Sample No.: J7F130344-1

Report No.: 35707

Received Date: 6/13/2007 2:14:00 PM

Client Sample ID: J155M9

COC No.: RC-076-17

Matrix: WATER

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7165249	Work Order: J0XQ51AE				Report DB ID: J0XQ51ER	Orig Sa DB ID: 9J0XQ510						
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	6/13/07		100.0	7196_CR6
	2.00E-03	U RPD	0.0			2.00E-03		N/A			ML	

Number of Results: 1

Comments:

STL Richland RPD - Relative Percent Difference.

rptSTLRchDupV5.1 MDC|MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

.3 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II
BLANK RESULTS

Date: 25-Jun-07

Lab Name: STL Richland

SDG: J00114

Lot-Sample No.: #Error

Report No.: 35707

Matrix: WATER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 7165249	Work Order: J01JA1AA			Report DB ID: J01JA1AB								
HEXCHROME	2.00E-03	U		0.0E+00	2.00E-03	mg/L	N/A	1.	6/13/07		100.0	7196_CR6
					2.00E-03			N/A			ML	

Number of Results: 1

Comments:

FORM II
LCS RESULTS

Date: 25-Jun-07

Lab Name: STL Richland

SDG: J00114

Lot-Sample No.: #Error

Report No.: 35707

Matrix: WATER

Parameter	Result	Count Qual Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 7165249	Work Order: J01JA1AC											
HEXCHROME	5.05E-01		0.0E+00	2.00E-03 mg/L		N/A	5.00E-01		101%	6/13/07	100.0	7196_CR6
						Rec Limits:	85.	115.	0.0		ML	

Number of Results: 1

Comments:

FORM II MATRIX SPIKE RESULTS

Date: 25-Jun-07

Lab Name: STL Richland

SDG: J00114

Lot-Sample No.: J7F130344-1, J155M9

Report No.: 35707

Matrix: WATER

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Rpt Unit, CRDL	Yield	Rec- overy	Exp- ected	Exp Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 7165249	Work Order: J0XQ51AC			Report DB ID: J0XQ51CW		Orig Sa DB ID: 9J0XQ510							
HEXCHROME	5.31E-01			0.0E+00	2.00E-03	mg/L	N/A	100.95%	5.26E-01		6/13/07	100.0	7196_CR6
	2.00E-03											ML	

Number of Results: 1

Comments:

STL Richland RER - Replicate Error Ratio = $(S-D)/[\text{sqrt}(\text{sq}(\text{TPUs})+\text{sq}(\text{TPUd}))]$ as defined by ICPT BOA.

rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30.

V5.1.3 A2002

Work Order Number(s): J01JA, J0XQ5				
Lab Sample Numbers or SDG: J00114				
Method/Test/Parameter: Cr+6 in Water / RICH-WC-5003				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration	✓			
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration	✓			
1. CCV analyzed at required frequency and all parameters within QC limits?				✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis			✓	
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?				✓
2. Were all sample holding times met?	✓			✓
D. QC Samples	✓			
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?			✓	✓
5. ICP only: One serial dilution performed per SDG?			✓	✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	—

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
E. Other			✓	
1. Are all nonconformances included and noted?				
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:

Analyst:

Steven E. Williams

Date:

6/13/07

Second-Level Review:

Sherry A. Adams

Date:

6-25-07

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-076-017		Page 1 of 1	
Collector D.W. Shea		Company Contact D.W. Shea		Telephone No. 521-6014		Project Coordinator KESSNER, JH		Price Code Data Turnaround	
Project Designation 100-D/DR Burial Grounds&Remaining Sites - Aqueous Liqu		Sampling Location 100-D-56		SAF No. RC-076					
Ice Chest No.		Field Logbook No. EL-1607-1		COA R00D562600		Method of Shipment Company vehicle			
Shipped To Severn Trent Incorporated, Richland		Offsite Property No.		Bill of Lading/Air Bill No.					
POSSIBLE SAMPLE HAZARDS/REMARKS Cr+6 Special Handling and/or Storage		Preservation		Cool AC					
		Type of Container		G/P					
		No. of Container(s)		1					
		Volume		250mL					
SAMPLE ANALYSIS				Chromium Hex - 7196					
Sample No.	Matrix *	Sample Date	Sample Time						
J155M9	WATER	6/13/07	1233	✓	J0X05	J0X05	J0X05	J0X05	J0X05
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS					Matrix *
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						S=Soil SE=Sediment SD=Solid SL=Sludge W=Water O=Oil A=Air DS=Drown Solid DL=Drown Liquid T=Trace Wt=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time						
LABORATORY SECTION	Received By	Title		Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time					

WCH-EE-011

Sample Check-in List

Date/Time Received: 06-13-07 14:14Client: BH1 SDG #: J00114 NA ☐ SAF #: RC-076 NA ☐Work Order Number: J7F130344 Chain of Custody # RC-076-017

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: _____ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐
8. Samples have:
____ tape _____ hazard labels
____ custody seals _____ appropriate samples labels
9. Samples are:
____ in good condition _____ leaking
____ broken _____ have air bubbles
(Only for samples requiring head space)
10. Sample pH taken? NA ☐ pH<2 ☐ pH>2 ☒ pH>9 ☐
11. Sample Location, Sample Collector Listed? * Yes ☒ No ☐
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒
13. Description of anomalies (include sample numbers): NO TAT ON COC - SKS 6/21/07

Sample Custodian: A. Smith Date: 06-13-07

Client Sample ID	Analysis Requested	Condition	Comments/Action
<u>J155m9</u>	<u>Crt6</u>	<u>N/A</u>	<u>Email to Client</u>

Client Informed on 6/14/07 by Rhonda Wagner Person contacted Joan Kesoner☐ No action necessary; process as is.Project Manager: Samaha Segun Date: 6/21/07

Wagar, Rhonda

From: Kessner, Joan H [jhkessne@wch-rcc.com]
Sent: Thursday, June 14, 2007 3:08 PM
To: Wagar, Rhonda
Subject: RE: COC for SDG J00114

Rhonda--
The turn around time for this one is 7 days.
Thanks for checking,
Joan

From: Wagar, Rhonda [mailto:RWagar@stl-inc.com]
Sent: Thursday, June 14, 2007 10:50 AM
To: Kessner, Joan H
Subject: COC for SDG J00114

Hi Joan,

Attached is a copy of the COC we received yesterday for a water chromium sample; what is the TAT for this sample?

Thanks.

Rhonda Wagar

QA Project Specialist
STL Richland
509-375-3131

Leaders in Environmental Testing

Confidentiality Notice: The information contained in this message is intended only for the use of the addressee, and may be confidential and/or privileged. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

6/14/2007 1:02:46 PM

Sample Preparation/Analysis

Balance Id:

127642, Washington Closure Hanford
Bechtel Hanford, Inc.88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/27/2007

Sep1 DT/Tm Tech:

Batch: 7165249 WATER mg/L
SEQ Batch, Test: None All Tests: 88EA, 7165249 88EA,

PM, Quote: SS , 27023

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 J0XQ5-1-AA								
J7F130344-1-SAMP								
06/13/2007 12:33		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
2 J0XQ5-1-AC-S								
J7F130344-1-MS								
06/13/2007 12:33		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
3 J0XQ5-1-AD-D								
J7F130344-1-MSD								
06/13/2007 12:33		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
4 J0XQ5-1-AE-X								
J7F130344-1-DUP								
06/13/2007 12:33		AmtRec: 250G	#Containers: 1			Scr:	Alpha:	Beta:
5 J01JA-1-AA-B								
J7F140000-249-BLK								
06/13/2007 12:33		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
6 J01JA-1-AC-C								
J7F140000-249-LCS								
06/13/2007 12:33		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

6/14/2007 1:02:47 PM

Sample Preparation/Analysis

Balance Id:

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 07/27/2007

Sep1 DT/Tm Tech:

Batch: 7165249 mg/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Comments:

All Clients for Batch:

127642, Washington Closure Hanford

Bechtel Hanford, Inc.

, SS , 27023

J0XQ51AA-SAMP Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

J0XQ51AC-MS Constituent List:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

J0XQ51AD-MSD:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

J01JA1AA-BLK:

HEXCHROME RDL:0.002 mg/L LCL: UCL: RPD:

J01JA1AC-LCS:

HEXCHROME RDL:0.002 mg/L LCL:85 UCL:115 RPD:20

J0XQ51AA-SAMP Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J0XQ51AC-MS Calc Info:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J0XQ51AD-MSD:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J01JA1AA-BLK:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

J01JA1AC-LCS:

Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____

Date: _____

STL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 6

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

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